

at least first and second annular bearing means located between the outer surface and the recess to facilitate rotation of the male and female connectors about the central axis;

wherein the diameter of each bearing means is larger than the diameter of each adjacent bearing means closer to the first end of the male connector; and

wherein the male and female connectors form a flow passage of the swivel joint

Remarks

Reconsideration of the above-referenced application is respectfully requested.

Claims 1-5, 12 and 13 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Pursuant to the July 30, 1996 discussion with the Examiner, the words "constant radius" have been deleted from claims 1 and 13 to alleviate the Examiner's confusion. Therefore, claims 1-5, 12 and 13 are submitted as allowable under §112, second paragraph.

Claims 1, 2, 12 and 18-20 stand rejected under 35 U.S.C. §102(b) as being anticipated by Himes (U.S. Patent No. 1,452,603). Claims 1, 19 and 20, on which the other claims depend, have been amended to clarify that the present invention is directed to a swivel joint which, as explained in the description, forms a flow passage for conveying fluid or other materials. Himes, to the contrary, discloses a bearing arrangement for a grinding machine. Thus, Himes clearly does not disclose a swivel joint having a hollow tubular male

connector and a hollow tubular female connector which when joined form a flow passage. Therefore, claims 1, 19 and 20 are not anticipated by Himes. Claims 2, 12 and 18, which depend on these claims, are likewise not anticipated by Himes.

Claims 19 and 20 stand rejected under 35 U.S.C. §103 as being unpatentable over Waters (U.S. Patent No. 738,503) in view of Phillips (U.S. Patent No. 2,412,287), Ashton (U.S. Patent No. 3,372,715) or Swedish Patent No. 127,402. The combination of these references, in addition to being improper, does not disclose the claimed invention and is improper.

While the Examiner appears to be correct in noting that members A and B of Waters may be rotated relative to each other, Waters does not disclose a swivel joint having roller bearing means. Rather, Waters discloses a pipe coupling employing spring bands d and d' to removably attach the male member to the female member. Band d is retained on the male member in groove e and band d' is retained in the female member in groove c. When the male member is inserted into the female member, band d expands into shallow groove c' and band d' expands into shallow groove e' to lock the male member in place.

Moreover, the radius of the "groove" defined by grooves c and e' close to the end of the male member is larger than the radius of the "groove" defined by grooves c' and e farther from the end of the male member, contrary to applicants' claims 19 and 20. Therefore, even if Waters could be combined with the other references, this combination would not suggest applicants' claimed invention.

However, the combination of Waters and the other references is improper. The spring bands d and d' of Waters perform a function which is integral to Waters' invention. They permit the male and female members to be removable connected, as described above. Obviously, ball bearings could not be used in this arrangement, because the ball bearings would fall off the male and female members when these members are separated. Therefore, one of ordinary skill in the art would not be inclined to combine Ashton or Phillips with Waters, notwithstanding SW '402. Therefore, claims 19 and 20 are patentable over these references.

For the foregoing reasons, claims 1, 3-5 and 12-20 are submitted as allowable. Favorable action is solicited.

Respectfully submitted,



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